

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, ex rel, )  
W.A. DREW EDMONDSON, in his )  
capacity as ATTORNEY GENERAL )  
OF THE STATE OF OKLAHOMA, )  
et al. )  
Plaintiffs, )  
V. ) No. 05-CV-329-GKF-SAJ  
TYSON FOODS, INC., et al., )  
Defendants. )

REPORTER'S TRANSCRIPT OF PROCEEDINGS

MARCH 12, 2008

PRELIMINARY INJUNCTION HEARING

CLOSING ARGUMENTS

BEFORE THE HONORABLE GREGORY K. FRIZZELL, Judge

APPEARANCES:

For the Plaintiffs: Mr. Drew Edmondson  
Attorney General  
Mr. Robert Nance  
Mr. Daniel Lennington  
Ms. Kelly Hunter Burch  
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UNITED STATES COURT REPORTER



1 actually distributed this handbook. That exhibit said animal  
2 waste is a potential source of some 150 disease-causing  
3 organism or pathogens. When found in water or waste, these  
4 pathogens pose significant threats to humans and other animals.  
5 They can infect humans and animals through drinking water,  
6 contact with the skin or consumption of fish or other aquatic  
7 animals. The dangers have been recognized.

8           However, the State did not rest solely on  
9 Dr. Fisher's expert opinion as to fate and transport that this  
10 material and its pathogens would readily travel from field to  
11 waters. The State looked for even better evidence. We called  
12 Dr. Valerie Harwood with a Ph.D. in biomedical sciences and she  
13 was tasked with determining whether there was a biological  
14 fingerprint for the bacteria that would trace to poultry. She  
15 did so and she testified in this court about microbial source  
16 tracking. She was a contributor to the EPA guide on microbial  
17 source tracking. In effect, she helped write the book on  
18 microbial source tracking. Her testimony was that she was able  
19 to isolate markers which were distinct as to poultry and she  
20 identified the bacteria in water samples as being from poultry.  
21 She readily conceded that she found the same marker in one of  
22 20 samples for ducks and one of 20 samples for geese and that  
23 represented a five percent margin of error as to ducks and  
24 geese. However and significantly, she did not find that marker  
25 in the waste of cattle, swine or humans. Her conclusion was

1 that it was poultry waste in the Illinois River Watershed that  
2 posed a substantial, serious and immediate threat to human  
3 health.

4 Dr. Roger Olsen took a different path to the same  
5 conclusion. He examined chemical markers, his Ph.D. being in  
6 geochemistry. His testimony was that he isolated 25 chemical  
7 markers in makeup and ratio that were distinctive to poultry  
8 waste as opposed to waste from other potential contributors.  
9 He tested samples from poultry houses, edge of field,  
10 groundwater, pathways and the streams themselves and found a  
11 unique and distinctive chemical bacterial signature of poultry  
12 waste. Dr. Olsen's conclusion was that the contamination of  
13 the Illinois River Watershed was from land-applied poultry  
14 waste and that other contributors were not significant in  
15 comparison.

16 There was much testimony from defense experts faulting  
17 Dr. Harwood and Dr. Olsen on their techniques and methods.  
18 Defense experts would have taken more samples or run more tests  
19 or spent more time in Dr. Myoda's warehouse of fecal samples.  
20 Defense experts repeatedly said they would not draw the same  
21 conclusions from the tests conducted and methods used by  
22 Drs. Harwood and Olsen. But no defense expert could say or did  
23 say that they were wrong. Dr. Hennes admitted that the PCA  
24 method used by Olsen to develop the poultry signature were  
25 well-established tools used by scientists including himself to

1 determine the source of contamination. Dr. Hennet offered  
2 criticism of how Olsen used PCA, that's the chemical tracking,  
3 but admitted that he never did run the PCA analysis himself to  
4 determine if his criticisms were valid.

5 Thus contrary to defendants' initial claims, the  
6 methods that Olsen used to find the signature and source  
7 identification of IRW contamination is well established and  
8 considered reliable by the scientific community. Defendants  
9 only offered speculative arguments as to whether Olsen properly  
10 performed PCA. They could have but never tried to run the PCA  
11 analyses themselves to determine if their criticisms were  
12 material. Essentially, Dr. Olsen's methods and results are not  
13 meaningfully rebutted.

14 Dr. Harwood identified a specific poultry gene, i.e.,  
15 a strand of DNA that was only found in poultry. Dr. Myoda  
16 admitted on direct and cross-examination that Harwood's methods  
17 were standard and even used in his own lab. The only thing new  
18 according to Myoda was the identification of a specific strand  
19 of DNA unique to poultry. The uniqueness was simply the use of  
20 an established scientific method to find a unique piece of DNA.  
21 I think it's important to note here that based upon her work,  
22 that Dr. Harwood has also been tasked, according to her  
23 testimony, by the EPA to do similar analysis in the Gulf of  
24 Mexico to find the source of pollution.

25 Based on the testimony of Drs. Harwood and Olsen,